Predictors of Quality of Life Among Hemodialysis Patients in A Government Hospital

Vivienne Antonette A. Cortes, RN, MANM, and Joan P. Bacarisas, DM, MAN, RN

Graduate School of Allied Health Sciences, University of the Visayas

ABSTRACT

End-stage renal disease (ESRD) significantly impacts patients' physical, psychological, and social well-being, making quality of life (QoL) a key outcome in long-term hemodialysis care. This study aimed to assess the QoL and its predictors among hemodialysis patients in a government hospital. Using a descriptive-predictive design, data were gathered from 70 patients selected through total enumeration. Validated questionnaires measured socio-demographic characteristics and QoL across four dimensions: sense of security and safety; freedom, mobility, and autonomy; personal health and medical intervention; and stress and coping. Descriptive statistics and multiple linear regression were used for analysis. Results showed that respondents generally experienced fair QoL, with lower scores in health-related and coping domains. Age, highest educational attainment, and occupation significantly predicted QoL indicating that younger, more educated, and employed patients reported better well-being. Other variables such as gender, civil status, religion, income, comorbidities, and dialysis-related factors were not statistically significant. The regression model yielded $R^2 = 0.407$, indicating a moderate effect, with predictors explaining about 41% of the variance in QoL. These findings affirm Ferrans' and Powers' Quality of Life Model, which highlights the interaction between life circumstances and personal satisfaction. The study emphasizes the need for holistic, patient-centered interventions that go beyond clinical treatment and address educational, economic, and psychosocial support to improve overall quality of life among hemodialysis patients.

Keywords: Hemodialysis, Quality of life, Predictors, Socio-demographic Characteristics, Ferrans and Powers' Quality of life model

INTRODUCTION

The quality of life (QoL) of hemodialysis patients is a critical component of their overall well-being. Studies show that they have lower QoL compared to the general population, transplant recipients, and those with other chronic illnesses such as asthma (Hedayati et al., 2016). This is due to a range of physical, psychological, social, and environmental challenges associated with long-term treatment. Key determinants of QoL include age, comorbidities, economic status, and the duration of dialysis. Managing these factors especially through early intervention and financial assistance can improve patient outcomes, reinforcing the need for holistic, patient-centered care.

Globally, nearly two million people rely on chronic hemodialysis (WHO, 2020). This number is expected to grow due to aging populations and the increasing prevalence of hypertension and diabetes. While life-sustaining, hemodialysis can lead to physiological strain, emotional distress, and financial burdens. These factors are linked to adverse outcomes such as depression, malnutrition, and increased mortality (Martino et al., 2018).

This study examines the predictors of QoL among hemodialysis patients, focusing on physical, psychosocial, emotional, and spiritual dimensions. Frequent treatment sessions often result in fatigue, anxiety, and depressive symptoms (Chen et al., 2010). Financial demands remain high, and barriers like limited insurance coverage and geographic access continue to affect care. Chronic kidney disease (CKD) affects 8%–16% of the global population, with over 1.4 million receiving renal replacement therapy (ISN, 2021). In the Philippines, PhilHealth coverage in remote areas dropped to 52% from 2018 to 2021, limiting treatment access and QoL.

By identifying the predictors of QoL, this study aims to inform individualized care plans and strengthen advocacy for psychosocial support. From a nursing management lens, findings can guide nurse leaders in care planning, staff deployment, and interprofessional coordination. The results will support education, resource planning, and policy development, reinforcing evidence-based and equitable care models. This study also aligns with SDG 3 (Good Health and Well-being) and SDG 10 (Reduced Inequalities), bridging gaps in knowledge, practice, and access for both healthcare professionals and patients.

RESEARCH QUESTIONS

This study aimed to assess the predictors of quality of life (QoL) among hemodialysis patients in a government hospital in Surigao City during the third quarter of 2024.

Specifically, it sought to answer the following question:

What are the socio-demographic characteristics of the patient-respondents in terms of:

• Personal Characteristics – age, gender, civil status, highest educational attainment, and religion;

• Financial Status – occupation, estimated family monthly income, other financial support, and type of residency;

• Health and Illness-Related Aspects – presence of medical and psychological comorbidities, primary cause of dialysis, duration (months/years) undergoing hemodialysis, frequency of hemodialysis per week, and other medical requirements related to treatment?

What is the quality of life of the respondents in terms of:

• Sense of security and safety;

• Freedom, mobility, and autonomy;

• Personal health and medical intervention;

• Stress and coping?

Which socio-demographic characteristics significantly predict the quality of life of hemodialysis patients?

Based on the findings, what ESRD Quality-of-Life Enhancement Plan can be proposed?

Statement of Null Hypothesis

H₀: Socio- demographic characteristics do not predict quality of life.

REVIEW OF RELATED LITERATURE AND STUDIES

Quality of Life. Recent literature emphasizes the multidimensional nature of quality of life (QoL) among hemodialysis patients, shaped by a complex interplay of physical, psychosocial, and environmental factors. Shadin et al. (2025) highlighted the role of optimism and mental framing in enhancing QoL, while Sułkowski et al. (2024) and Zhang et al. (2014) underscored the protective influence of social support. In contrast, Gimeno Hernan et al. (2025) found that even when care is perceived positively, QoL does not automatically improve, pointing to the independent weight of psychosocial and clinical burdens. Abbas et al. (2024) identified dialysis frequency, age, and comorbidities as clinical drivers of diminished QoL.

In the Philippine setting, where dialysis patients often face fragmented social support and economic hardship, these findings validate the need for integrated interventions that go beyond clinical care. This underscores the study's relevance in designing context-specific strategies that promote psychosocial resilience alongside medical management.

Predictors of Quality of Life. QoL is influenced by diverse predictors ranging from biological markers like CRP (Kalantar-Zadeh et al., 2021) to lifestyle factors such as physical activity (Bogataj et al., 2021). Psychosocial elements, including health literacy and self-efficacy, have also been found to drive self-management and QoL (Park & Jung, 2025). Emotional stressors and comorbidities, particularly in older patients, were linked to lower QoL (Alshogran et al., 2021; Szu et al., 2023). Non-pharmacologic interventions, such as yoga, have demonstrated improvements in QoL (AIIMS Raipur, 2025).

In the local context, these findings highlight the need to broaden QoL predictors beyond clinical indicators. This study builds on that by identifying which socio-demographic characteristics significantly influence QoL among Filipino hemodialysis patients.

Physical Health Status as dimensions of Quality of life. Physical well-being remains central to QoL, with regular activity and physiological stability consistently linked to better outcomes (Bogataj et al., 2021; Min et al., 2025). High inflammation markers and intradialytic hypotension significantly reduce QoL scores, while self-efficacy enhances self-care (Kalantar-Zadeh et al., 2021; Park & Jung, 2025). These highlight the necessity of stabilizing physical conditions and promoting patient empowerment. Given the physical challenges hemodialysis patients face in the Philippines often compounded by delayed access to care this study contextualizes these global findings by identifying locally relevant physical health predictors of QoL.

Mental Health and Psychological Factors. Psychological health is tightly interwoven with QoL. Depression and anxiety remain prevalent, with strong links to poor sleep, low treatment adherence, and impaired social functioning (Abdullahi et al., 2023; Gawad et al., 2025). Studies like the CONVINCE trial emphasize self-efficacy and coping mechanisms as buffers against psychological distress (van der Willik et al., 2025; Zhou et al., 2023). In resource-limited Filipino settings, where access to mental health support is scarce, these insights inform the need for integrating psychological care into routine dialysis services—a gap this study seeks to address.

Social Support. Social support has consistently been linked to better QoL outcomes, with emotional, informational, and familial support improving psychological and physical well-being (Sułkowski et al., 2024; van der Willik et al., 2024). Family resilience and perceived support correlate positively with adaptation and life satisfaction (Chen et al., 2024; Alshahrani et al., 2023). These findings hold particular relevance for Filipino families, where caregiving is often a communal effort. This study examines how social support, particularly familial, interacts with other factors to shape the QoL of local patients.

Spiritual Well-Being. Spirituality serves as a protective factor, enhancing treatment adherence, emotional regulation, and overall life satisfaction (Hassani et al., 2022; Ebrahimi et al., 2020). Pilger et al. (2017) linked high spiritual well-being with improved psychological and social QoL scores.

In predominantly Catholic communities in the Philippines, spiritual coping is a deeply rooted mechanism. This study's findings align with the literature by acknowledging spiritual well-being as a possible unmeasured influence on patient outlook and engagement.

Personal Characteristics on Quality of life. Individual factors like age, gender, civil status, and educational attainment have been shown to shape QoL. Younger patients generally report better QoL (de Abreu et al., 2024), while educational attainment supports better disease management and self-care (Nogueira et al., 2023). Civil status and religion influence emotional well-being through support systems and coping behaviors (Lopez-Vargas et al., 2023; Rezende et al., 2020). This study confirms that these personal variables hold predictive value in the local setting, providing a basis for targeted, patient-centered strategies.

Financial status on Quality of life. Economic conditions, such as employment, income level, and financial assistance, are strongly correlated with QoL. Unemployment among dialysis patients is alarmingly high and linked to reduced well-being (Sadat Hejazi et al., 2021). Similarly, financial strain from travel costs and limited resources disproportionately affects rural patients (Lemos et al., 2015; Alshahrani et al., 2023).

In the Philippines, where out-of-pocket health spending remains a barrier, this study highlights the urgent need

for socio-economic interventions to buffer the financial burden of chronic treatment.

Health and Illness related factors as predictor on quality of life. Comorbidities and treatment-related factors like dialysis frequency, disease cause, and duration affect both physical function and emotional resilience (Elshahat et al., 2022; Khalil et al., 2021). Psychological comorbidities amplify this burden, decreasing treatment compliance and social integration (Alshraifeen et al., 2020). This study echoes these findings by illustrating how select health-related factors contribute to QoL, reinforcing the need for individualized care plans tailored to both clinical and psychosocial needs.

RESEARCH METHODOLOGY

Design. The study made use of a descriptive predictive design. The descriptive design was utilized to describe the socio-demographic, financial, and health-related characteristics of hemodialysis patients and to assess how these variables could predict their quality of life (QoL) outcomes. The predictive design was used to determine of the socio demographic profile predicted the quality of life of hemodialysis patients.

Environment. This study was conducted at a government hospital in Surigao City during the third quarter of 2024.
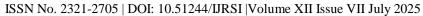
Respondents. The respondents of this study were hemodialysis patients from a government hospital in Surigao City, specifically 50 outpatients and 20 inpatients, making a total of 70 participants.

Sampling Design. This study used a complete enumeration sampling method.

Inclusion Criteria and Exclusion Criteria. Participants must be at least 18 years old, regardless of gender, marital status, religion, income, or educational background, currently receiving hemodialysis at a government hospital in Surigao, able to read and write, and willing to give informed consent. Excluded were patients under 18, those unable to understand or respond due to blindness, deafness, or severe dementia, and those not meeting inclusion criteria.

Instrument. This study used an instrument with three sections, translated into Surigaonon for comprehension. Part I: Sociodemographic Profile collects personal characteristics (age, gender, marital status), financial status (income, employment), and health aspects (chronic illnesses, hemodialysis experience). Part II uses the adapted Quality of Life Questionnaire by Devins et al. (2010), with 10 items on a five-point Likert scale (1=completely dissatisfied to 5=completely satisfied). Scores: 1.00–1.80 completely dissatisfied, 1.81–2.60 dissatisfied, 2.61–3.40 neither, 3.41–4.20 satisfied, 4.21–5.00 completely satisfied. Part III uses adapted the Kidney Disease Quality of Life Short Form Version 1.3 (KDQOL-SF™) from RAND, with 36 items assessing eight domains. Scores range from 0–100; higher scores indicate better HRQOL, with PCS and MCS summaries (mean 50, SD 10). The KDQOL-SF™ detects clinical changes in dialysis patients over time. The Devins et al. (2010) and KDQOL-SF™ instruments are validated and widely used; however, Surigaonon translation requires revalidation. A pre-test will check clarity, and content validation by three experts will ensure relevance and accuracy.

Data Gathering Procedures. Before data collection began, the researcher submitted the study title for approval and was assigned a research adviser. Approval letters were secured and addressed from the Dean of Allied Health Sciences, Chief Academic Officer, Medical Center Chief, and the Human Research Ethics Committee of a government hospital in Surigao. A design hearing was conducted to assess the technical and ethical soundness of the study. Approval from the Ethics Committee or Institutional Review Board (IRB) was obtained prior to data collection. After obtaining all necessary permissions, the researcher distributed the survey questionnaires to the respondents. Questionnaires were given 10–15 minutes after their hemodialysis treatment. The objectives of the study were explained, and respondents were assured of voluntary participation and confidentiality. Strict COVID-19 measures were observed, including wearing masks, social distancing, and sanitizing. Questionnaires were placed in plastic envelopes and sanitized before and after use. Critically ill hemodialysis patients were not included. Respondents self-evaluated to complete the questionnaire, and all questionnaires were checked for completeness; incomplete forms were returned for completion. After data collection, data were collated and

analyzed using appropriate statistical methods. Data analysis addressed the research questions and objectives. Results were interpreted and presented in tables with corresponding implications and supporting literature. Finally, all answered questionnaires and identifying data were shredded to ensure confidentiality.

Statistical Treatment of Data. The statistical data were analyzed. The following descriptive and inferential statistics were used in the study: Frequency Distribution and Simple Percentage were used to present the magnitude of a given choices specifically for categorical variables such as the sociodemographic profile of the respondents. Mean scores and standard deviation were used to determine the quality of life of hemodialysis patients. And, Multiple Linear Regression used to assess whether the socio demographic profile predicts quality of life among hemodialysis patients.

Ethical Considerations. Ethical considerations are an essential component of any research study. The study was submitted for ethical approval prior to data gathering.

Presentation, Analysis, And Interpretation of Data

Table 1 Personal Characteristics of the Respondents

Personal Characteristics	*f*	*%*
Age		
18 – 35 years old	11	15.70
36 – 55 years old	30	42.90
56 years old and above	29	41.40
Gender		
Male	35	50.00
Female	35	50.00
Civil Status		
Single	10	14.30
Married	54	77.10
Separated	2	2.90
Widowed	4	5.70
Highest Educational Attainment		
No education	29	41.40
High School	40	57.10
College	1	1.40
Religion		
Roman Catholic	60	85.70

| Christian | 7 | 10.00 |
| Others (Baptist and SDA) | 3 | 4.30 |

Note: *n=70.*

The demographic profile of the respondents reveals a predominantly older population, with the majority being middle-aged or elderly, aligning with global trends in end-stage renal disease (Molsted, Eidemak, & Sorensen, 2007; Abdel-Kader et al., 2009). Interestingly, only a small portion of participants are young adults, highlighting the growing burden of chronic illness among older age groups. Gender distribution in the sample is evenly split between males and females, consistent with earlier studies suggesting no significant gender disparity in access to or need for hemodialysis (Sesso, Yoshihiro, & Ajzen, 2003; Weisbord et al., 2003).

A notable finding is the high percentage of married individuals, which may suggest the presence of family support systems among patients—a factor often linked to better coping and quality of life (Rebollo et al., 2001; Zhang et al., 2014). However, what stands out most in the data is the low level of educational attainment: a significant proportion of the respondents have either no formal education or only completed high school, with very few having pursued college education (Moreno et al., 2021). This may have implications for health literacy and treatment adherence.

Additionally, religious affiliation is heavily skewed, with the vast majority identifying as Roman Catholic. This suggests a relatively homogeneous religious context, which could influence patients' coping mechanisms, social support, and engagement with care (Chiang et al., 2017).

Table 2 Characteristics in terms of Financial Status of the Respondents

Financial Status	*f*	*%*
Occupation		
None	59	84.30
Retired	2	2.90
Govt Employee	2	2.90
Private Employee	5	7.10
Business owner (Fish vending, small business, farmer)	1	1.40
Student	1	1.40
Estimated Family Monthly Income:		
Php 9,999-below	20	28.60
Php 10,000-19,999	26	37.10
Php 20,000-29,999	12	17.10
Php 30,000-39,999	6	8.60
Php 40,000-49,999	6	8.60

Other Financial Support		
Family	68	97.10
Government	2	2.90
Type of Residency		
Owned	62	88.60
Rented	8	11.40

Note: *n=70.*

Table 2 shows the financial status of the respondents. A significant majority (84.30%) reported having no occupation, with only 7.10% working in the private sector, 2.90% in government service, 2.90% retired, 1.40% in small businesses, and 1.40% students. The respondents' income distribution shows that 65.70% earn below Php 20,000 per month, with 28.60% earning less than Php 9,999, 17.10% earning Php 20,000–29,999, and 8.60% each earning Php 30,000–39,999 and Php 40,000–49,999. A vast majority (97.10%) rely on family members for financial assistance, and only 2.90% receive government aid. Most respondents (88.60%) own their homes, while 11.40% live in rented accommodations.

The financial profile highlights economic challenges due to high unemployment and low income. Strong dependence on family support suggests financial sustainability is a collective effort. Low socioeconomic status is associated with worse quality of life, greater symptom burden, and increased depression and hospitalization (Lozano et al., 2022). Homeownership provides some security, as patients who own homes report better physical and mental health (Li et al., 2020). Family support buffers financial and emotional stress (Bonner et al., 2019), but reliance on family alone may strain household resources. Unemployment rates among dialysis patients are high globally (Pecoits-Filho et al., 2021).

Table 3 Characteristics of Respondents in terms of Health and Illness Related Aspects

Health and Illness Related Aspects	*f*	*%*
Medical and Psychological Comorbidity		
Hypertension	34	48.60
Diabetes	31	44.30
Chronic Glomerulonephritis	5	7.10
No. of Months/Year in the Procedure		
6 months below	15	21.40
7 months to 1 year	15	21.40
More than 1 year	40	57.10
Frequency of the Procedure		
Two times a week	58	82.90

Three times a week	12	17.10

Note: *n=70.*

Understanding the health and illness-related characteristics of the respondents provides important insights into their medical complexities. Hypertension and diabetes are the most commonly reported comorbidities, indicating a heavy burden of chronic diseases and their contribution to end-stage renal disease. Chronic glomerulonephritis is also present. The duration of hemodialysis treatment shows many respondents are in long-term care, reflecting the chronic nature of their illnesses. Longer dialysis duration is associated with increased symptom burden, reduced physical functioning, and higher risk of complications (Neyra & Collins, 2021). Treatment frequency patterns show twice-weekly sessions are common, but some require thrice-weekly dialysis, indicating advanced clinical conditions. Patients on twice-weekly regimens may have lower clearance of toxins and fluid, affect health outcomes unless manage carefully (Daugirdas et al., 2021).

Health and illness-related aspects, such as comorbidities, duration of treatment, and frequency of sessions, are crucial factors influencing quality of life. Hypertension affects 70–90% of ESRD patients, contributing to cardiovascular complications (Masajtis-Zagajewska et al., 2021). Diabetes mellitus remains a major cause of chronic kidney disease (Pérez-Gómez et al., 2020). The high rates of hypertension and diabetes emphasize the need for integrated management alongside dialysis care. Twice-weekly dialysis requires careful patient selection to avoid underdialysis (Kalantar-Zadeh et al., 2020). These findings highlight the necessity of comprehensive, patient-centered strategies to optimize outcomes and enhance quality of life.

Table 4 Quality of Life of the Respondents

Dimensions	Mean score	SD	Interpretation
A. Sense of Security and Safety			
For the last few week/months that you are having Hemodialysis you were able to perform the following activities.			
1. Lack of money keep you from doing the things you wish to do.	3.01	0.752	Sometimes
2. Believed that could recover from the present health problems.	2.93	0.767	Sometimes
3. Felt of being left out and odd with people around you.	2.73	0.700	Sometimes
4. Received compliments from family and friends.	4.00	0.993	Often
5. Happy with the clothes you wear.	4.03	0.900	Often
6. You still have a decent paying job.	1.47	1.059	Never
7. Hang out with your friends.	2.53	0.896	Seldom
8. Satisfied with your personal safety.	2.37	0.641	Seldom
9. Pursue at least one hobby.	2.03	0.636	Seldom
10. Have a healthy relationship with your parents.	3.99	1.028	Often

Factor mean	2.91	0.401	Fair QOL
B. Freedom, Mobility, and Autonomy			
For the last few week/months that you are having Hemodialysis you were able to perform the following activities.			
1. Visited family, neighbors and friends.	3.14	1.107	Sometimes
2. Managed to drive vehicles/motorcycle and other transportation means.	1.76	1.148	Never
3. Cleaned the house and perform other household chores.	2.59	1.097	Seldom
4. Took medicines alone and by yourself without any assistance from others.	3.84	1.337	Often
5. Prepared/cooked your own food/meals.	3.74	1.326	Often
6. Personally wash your clothes/laundry.	3.66	1.350	Often
7. Satisfied with the hygiene around the house.	3.91	0.989	Often
8. Hanged out with your friends and colleagues in the church.	2.83	1.154	Sometimes
9. Satisfied with your personal safety.	2.87	0.612	Sometimes
10. Satisfied with your family and children's future.	3.00	1.180	Sometimes
Factor mean	3.13	0.675	Fair QOL
C. Personal health and Medical Intervention			
For the last few week/months that you are having Hemodialysis experience the following health and other medical conditions:			
1. Experienced pains and body aches.	2.59	0.670	Seldom
2. Having other illness and diseases aside from the diagnosed condition such as:			
a. hypertension	2.66	0.720	Sometimes
b. diabetes	2.81	0.856	Sometimes
c. arthritis	2.29	1.206	Seldom
d. blurring of the eyes	2.33	1.003	Seldom
e. Gastrointestinal disease	1.36	0.512	Never
f. others	1.69	1.071	Never
Subfactor mean	2.19	0.541	Low QOL

3. Need blood transfusion.	1.39	0.519	Never
4. Difficulty of breathing.	1.91	0.812	Seldom
5. Frequent nausea and dizziness.	1.76	0.806	Never
Factor mean	1.97	0.429	Low QOL
D. Stress and Coping			
For the last few week/months that you are having Hemodialysis you experienced the following feelings and thoughts:			
1. Happy with the house I live in.	3.20	0.809	Sometimes
2. Satisfied with the hygiene around the house.	3.66	0.991	Often
3. My neighbors are good.	3.51	0.756	Often
4. Satisfied with the food that I eat.	2.70	0.645	Sometimes
5. Happy with the clothes I wear.	4.36	0.917	Always
6. Have a decent paying job.	1.37	0.820	Never
7. Hang out with my friends quite often.	2.40	1.055	Seldom
8. Satisfied with my personal safety.	2.73	0.612	Sometimes
9. Pursued at least one hobby.	2.59	0.752	Sometimes
10. Having a healthy relationship with my parents.	3.00	0.885	Sometimes
Factor mean	2.95	0.362	Fair QOL
Grand mean	2.74	0.269	Fair QOL

Note: *n=70.*

Legend: A score of 1.00 – 1.80 is very low QoL (never), 1.81 – 2.60 is low QoL (seldom), 2.61 – 3.40 is fair QoL (sometimes), 3.41 – 4.20 is high QoL (often), and 4.21 – 5.00 is very high QoL (always).

The findings revealed that the overall quality of life (QoL) of respondents undergoing hemodialysis is at a fair level, suggesting that while patients are able to perform some activities and manage aspects of their lives moderately well, there remain notable challenges impacting their daily experiences and general well-being (Lozano et al., 2022; Jhamb et al., 2019). This fair rating reflects a situation where patients "sometimes" experience positive life aspects, but these are inconsistent or incomplete, pointing to a life constrained by illness and dependent care. In the domain of Sense of Security and Safety, respondents scored a fair level of QoL. While patients often received compliments from family and friends and felt happy with aspects such as personal appearance and family relationships, challenges remained regarding financial limitations and social integration. A major concern was the inability to maintain decent employment and the decreased engagement in leisure activities (Lee et al., 2021).

In terms of Freedom, Mobility, and Autonomy, respondents also reported a fair level of QoL. Although patients could independently manage personal care tasks like taking medications, cooking meals, and maintaining hygiene, their mobility was notably restricted, as shown by the low ability to drive or visit friends frequently

(Daugirdas et al., 2021). The Personal Health and Medical Intervention domain showed the lowest QoL scores, with frequent physical symptoms such as pain, hypertension, diabetes complications, and other secondary health conditions (Masajtis-Zagajewska et al., 2021; Abdel-Kader et al., 2019).

The dimension of Stress and Coping also reflected a fair QoL level. Although respondents expressed satisfaction with certain aspects of their home environment and family relations, dissatisfaction with employment status, limited socialization, and coping fatigue were evident. Research by Bonner et al. (2020) emphasized that chronic illness leads to heightened emotional stress, affecting mental resilience and physical health. This implies the need for psychological counseling, peer support programs, and stress-reduction interventions to enhance their overall QoL.

Table 5 Characteristics Predicting Quality of Life

Variables	B	Std Error	Beta	t	p value	Decision	Interpretation
(Constant)	3.468	.345		10.046	.000		
Age	-.160	.044	-.426	-3.663	.001	Reject Ho	Significant
Gender	-.014	.060	-.026	-.232	.818	Failed to Reject Ho	Not significant
Civil status	-.044	.050	-.104	-.880	.382	Failed to Reject Ho	Not significant
Highest educational attainment	.159	.055	.307	2.869	.006	Reject Ho	Significant
Religion	.062	.063	.113	.984	.329	Failed to Reject Ho	Not significant
Occupation	.022	.028	.089	.785	.436	Reject Ho	Significant
Estimated family monthly income	.021	.027	.094	.771	.444	Failed to Reject Ho	Not significant
Other financial support	-.192	.185	-.119	-1.036	.305	Failed to Reject Ho	Not significant
Type of residency	-.110	.098	-.131	-1.118	.268	Failed to Reject Ho	Not significant
Medical and psychological comorbidity	-.057	.048	-.132	-1.180	.243	Failed to Reject Ho	Not significant
Number of months/years in the procedure	-.064	.038	-.195	-1.696	.095	Failed to Reject Ho	Not significant
Frequency of the procedure	-.088	.076	-.124	-1.160	.251	Failed to Reject Ho	Not significant

Legend: Significant if p value is $\leq$ .05. Reject Ho if p < .05; "Fail to reject Ho" if p $\geq$ .05. Dependent variable:

Quality of Life. If R-squared value < 0.3 is None or Very weak effect size, if R-squared value 0.3 < r < 0.5 is Weak or low effect size, if R-squared value 0.5 < r < 0.7 is Moderate effect size, and if R-squared value r > 0.7 is Strong effect size.

The findings revealed that among the socio-demographic and clinical variables analyzed, age, highest educational attainment, and occupation significantly predicted the quality of life (QoL) of hemodialysis patients. Other factors such as gender, civil status, religion, family income, other financial support, type of residency, comorbidities, duration of hemodialysis, and frequency of dialysis sessions were found to have no significant predictive relationship with QoL.

The negative coefficient for age suggests that younger patients tend to report better QoL compared to older patients. This trend aligns with previous studies such as that by Udomkarnjananun et al. (2021). Younger individuals often have better physiological resilience, are generally more physically active, have fewer comorbidities, and are more adaptable to treatment routines. Older patients tend to report more fatigue, limitations in mobility, and emotional distress, which negatively impact their QoL.

Highest educational attainment exhibited a positive predictive relationship with QoL. This finding echoes the results of Wong et al. (2020). Patients with higher educational backgrounds tend to better understand their disease, adhere more strictly to treatment regimens, and actively participate in their care. Educated patients are often seen asking clarifying questions during consultations, adhering to dietary restrictions more consistently, and seeking additional resources to cope with the illness. Occupation also showed a positive influence on QoL, supporting the findings of Pecoits-Filho et al. (2021). Having a job provides financial resources, a sense of purpose, routine, and self-worth. Employed dialysis patients are often observed to maintain better morale.

The regression model summary revealed R = .638, R Square = .407, Adjusted R Square = .282, Std. Error of Estimate = .22835, F = 3.259, Sig. = .001. The model created is:

Quality of Life = 3.468 – 3.363 (age) + 2.869 (highest educational attainment) + .785 (occupation)

The regression analysis produced an R-squared value of 0.407, indicating that the predictive model explains approximately 40.70% of the variance in QoL. According to Cohen's (1988) effect size interpretation, this represents a weak to moderate effect size. The overall significance level of the model (p = .001) confirms that the regression equation meaningfully predicts the outcome variable, demonstrating that the combined effects of age, education, and occupation meaningfully relate to QoL among hemodialysis patients. However, the R² value being below 0.5 indicates that a considerable portion of the variance in QoL remains unexplained, suggesting the influence of other psychological, social, or clinical factors not captured in this model.

CONCLUSION AND RECOMMENDATIONS

Conclusion. This study concluded that the quality of life (QoL) of hemodialysis patients is significantly influenced by age, educational attainment, and occupation. Interestingly, older patients reported better quality of life, which may be attributed to greater emotional adjustment, acceptance of their health condition, and stronger support systems developed over time. Similarly, individuals with higher educational attainment demonstrated better QoL, likely due to enhanced health literacy, more effective coping strategies, and a greater sense of control over their condition. Furthermore, those engaged in active occupations reported improved well-being, as employment contributes to financial security, a sense of purpose, and social interaction. These findings suggest that personal development and socio-economic involvement may have a greater impact on QoL than clinical factors alone, emphasizing the importance of holistic support programs that consider these predictive elements.

The findings of this study affirm Ferrans' and Powers' Quality of Life Model (1985, revised 1992), which emphasizes that QoL is shaped by both objective life circumstances and individuals' subjective satisfaction with those circumstances. The results support the model's key domains—health and functioning, socioeconomic status, and psychological well-being by showing that personal conditions and perceptions are central to how patients experience quality of life. In line with the model, the study reinforces the necessity of holistic, patient-

centered interventions that address not only clinical symptoms but also educational empowerment, occupational engagement, and psychosocial support to improve life satisfaction among hemodialysis patients. In response to these findings, a Quality-of-Life Enhancement Plan was developed.

Recommendations. Based on the significant findings of this study—that age, educational attainment, and occupation predict the quality of life (QoL) of hemodialysis patients, especially in dimensions such as safety, autonomy, medical support, and coping—the following actionable recommendations are proposed:

Nursing Practice. It is recommended that the findings be formally presented to hospital administration, particularly the nursing department, to advocate for the implementation of a Quality-of-Life Enhancement Plan for hemodialysis patients. The Nursing Service Office, in coordination with the dialysis unit, should lead this initiative. The plan should incorporate patient-centered programs focused on health literacy education, psychosocial support groups, autonomy and mobility training, and economic empowerment activities. Routine QoL assessments must be integrated into regular patient care audits and performance evaluations. This intervention model can also be adapted by other hospital units managing chronic illnesses and may be shared across healthcare institutions for replication and scaling.

Nursing Policy. The results highlight the need for policy development that promotes holistic, integrative, and nurse-led care strategies for hemodialysis patients. Nursing leaders should advocate for the institutionalization of multidisciplinary care teams, policies that support livelihood partnerships, skills development, and financial literacy programs, and the inclusion of quality-of-life indicators in nurse performance benchmarks. Policy frameworks should also support the allocation of resources for sustained QoL programming.

Nursing Education. This study serves as a valuable case for graduate and advanced nursing courses, particularly in nursing service administration, chronic care models, quality improvement, and strategic planning. It may be used to illustrate how predictive analytics guide program planning and how evidence-based leadership drives care innovations. Courses in nursing informatics, ethics, and outcomes-based evaluation can also integrate this study for applied learning and discussion.

Nursing Research. The findings should be disseminated through hospital-based research rounds, nursing grand conferences, and online academic platforms. The completed study may be submitted for publication in peer-reviewed journals that focus on nursing administration, chronic care, and healthcare innovation. Nurse leaders and researchers are encouraged to present this work at local and international research fora, showcasing how administrative strategies can elevate QoL among ESRD patients.

Additionally, the following future research titles are suggested:

A Phenomenological Inquiry on the Lived Experiences of Nurse Managers Supporting Quality of Life Among Hemodialysis Patients

A Comparative Analysis of Nursing Care Delivery Models and Their Impact on Hemodialysis Patients' Quality of Life in Government and Private Hospitals

A Mixed-Methods Study on Nurse-Led Interventions as Predictors of Health-Related Quality of Life Among ESRD Patient

End Stage Renal Disease (ESRD) Quality of Life Enhancement Plan

Rationale

The study revealed that the overall quality of life (QoL) of hemodialysis patients is at a fair level, particularly in the dimensions of sense of security and safety, freedom, mobility, and autonomy, personal health and medical intervention, and stress and coping. The regression analysis identified age, highest educational attainment, and occupation as significant predictors of QoL. These findings suggest a need for targeted interventions that enhance personal safety, independence, medical support, and coping strategies among end-stage renal disease (ESRD) patients undergoing long-term hemodialysis.

To ensure sustainability, designated members of the hospital's renal care team such as the nurse coordinator, social worker, and nephrologist will be responsible for monitoring the long-term implementation and continuity of these interventions. Regular evaluations will be conducted through patient feedback surveys, periodic QoL assessments, and multidisciplinary case reviews to determine the effectiveness and necessary adjustments of the programs over time. Post-implementation results will be measured against baseline data to track improvements in each QoL dimension and guide ongoing enhancement of patient-centered care.

General Objectives

To improve the overall quality of life among ESRD patients by addressing the identified weak dimensions through focused and sustainable interventions.

Specific Objectives

a. To enhance patients' sense of security and safety in daily life.

b. To improve independence and mobility in day-to-day functioning.

c. To reduce the burden of personal health limitations and improve symptom management.

d. To strengthen patients' coping mechanisms and emotional well-being.

Areas of Concern	Specific Objectives	Activities	Persons Responsible	Resources Needed	Time Frame	Success Indicators
Sense of Security and Safety	To enhance patients' sense of security and belonging	Conduct peer support group sessions; organize regular social interaction events within dialysis center	Social Worker, Nurse Counselor	Meeting space, facilitation materials	Monthly for 1 year	Improved scores in QoL sense of safety subscale
Freedom, Mobility, and Autonomy	To increase independence in self-care and mobility	Offer physical rehabilitation sessions; self-care skills workshops	Physical Therapist, Nurse Educator	Exercise guides, assistive tools	Bi-monthly for 6 months	Reported improvement in self-care and mobility tasks
Personal Health and Medical Intervention	To reduce symptom burden and increase clinical stability	Organize monthly medical checkups and patient education on symptom management	Nephrologist, Dietitian, Nurse	Health kits, printed guides	Monthly for 1 year	Improved clinical markers; lower symptom reports

Stress and Coping	To build emotional resilience and coping capacity	Implement structured counseling sessions; provide mindfulness and stress relief activities	Psychologist, Social Worker	Counseling tools, quiet room, stress kits	Twice a month for 6 months	Lower reported anxiety/stress levels
Integrated Health Education	To increase health literacy and disease understanding	Deliver quarterly health education seminars tailored to literacy levels	Nurse Educator, Dietitian	Multimedia materials, handouts	Quarterly	Higher scores in patient understanding and self-care practices

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